

REMARKS

Reconsideration and allowance of this application are respectfully requested.

Claims 1-17 are all the claims pending in the application.

I. Summary of the Final Office Action

Paragraph 34 (page 6, line 20) and paragraph 42 (page 7, line 22) are objected due to alleged informalities.

Claims 1-17 are rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Shen et al. (USP 6, 741,292) and in view of Gupta (US Pub. 2003/0197732).

II. Summary of Amendments

Applicant amends the objected paragraph 34 (page 6, line 20) and paragraph 42 (page 7, line 22) of the specification as suggested by the Examiner, and respectfully requests withdrawal of the objection.

Applicant amends apparatus claim 1 and corresponding method claim 7. No new matter is added. Applicant respectfully requests allowance of amended claims.

III. Disqualification of Gupta as Reference

Gupta, the secondary reference of the office action, bases its effective date as a reference on its provisional application No. 60/374,524 filed on April 23, 2002 which is two months earlier than the priority date of the present application (June 22, 2002). If, however, the provisional application does not provide the teachings that the Examiner ascribes to Gupta, Gupta should be removed as a qualifying reference.

In the office action, the Examiner alleges that Gupta discloses both of the two elements of the claimed digital video receiver (i.e., a program information converter; and a stream generator), while Shen, the primary reference, discloses only the program information converter. In relying on Gupta, the Examiner alleges that Fig. 1 discloses both elements of the claim by showing the table conversions being done in order to transmit the program according to the MPEG-2 standard.

Upon review of Gupta's provisional application, however, Fig. 1 and the alleged table conversion are not described in the provisional application. Specifically, the provisional application only teaches a graphical user interface showing correlation and inconsistencies between tables such as PMT and PAT. Not only is Fig. 1 missing in the provisional application, but no teaching or suggestion appears in the provisional application to disclose any of the two elements of the claim (converting program information into a suitable format for a recording/reproducing apparatus, and creating a data stream with the converted program information).

Thus, Applicant respectfully submits that Gupta should be removed as a qualifying reference since the teachings that the Examiner ascribes to Gupta are not provided in the provisional application. In this regard, in order to perfect priority of the present application, Applicant submits with this Amendment a verified translation of the priority document, KPA 10-2002-0035174 to which the present application claims priority. The priority document had already been filed with the USPTO along with the present application.

Moreover, as analyzed below, even the non-provisional application of Gupta (US Pub. 2003/0197732) does not disclose both elements of the claim contrary to the Examiner's

allegation. Therefore, Applicant respectfully submits that the claims of the present application would not have been rendered obvious in view of this reference.

IV. Analysis of Claim Rejection under 35 U.S.C. § 102(b)

[Claim 1]

In rejecting the claimed digital video receiver comprising two elements (i.e., a program information converter; and a stream generator), the Examiner alleges combining two references (Shen and Gupta) would have rendered the claimed receiver obvious.

Applicant amends claim 1 as noted above, and respectfully submits that the claimed digital video receiver would not have been obvious over the references.

Claim 1 as amended recites as follows:

“1. A digital video receiver, which receives and decodes a broadcasting program comprising program data comprising contents of the broadcasting program, and program information, creates a predetermined type of data stream and transmits a data stream to a recording/reproducing apparatus connected to the digital video receiver through an interface, the digital video receiver comprising:

program information converter operable to convert program information included in the broadcasting program into a format suitable for the recording/reproducing apparatus, wherein the program information is decoded prior to the converting; and

a stream generator operable to receive the converted program information and decoded program data included in the decoded broadcasting program data, and further operable to create a data stream with the received-converted program information and the decoded program data”

Shen Analysis

In Shen, the major concern of the invention is directed to not the STB 306 but the digital TV 302 which effectively processes both the analog and digital signals. The reference does not

suggest anything about program information included in a broadcasting program in addition to the broadcasting program contents data.

By contrast, the claimed receiver is configured to convert program information defined as being included in a broadcast program in addition to the broadcasting program data which is generally understood as representing contents of the program. This claimed program information is not taught as being processed by the STB. As the STB does not process the claimed program information, it is not necessary to discuss whether the STB converts the program information into a suitable format as claimed. Shen is silent about converting the program information as claimed into a suitable format for a recorder/reproducer.

In the meantime, Examiner alleges that “the STB 306 does the signal processing unless the signal is sent from the digital VCR” (col. 5, lines 64-67 of Shen). However, the signal processing alleged here also does not teach or suggest the claimed conversion of program information.

The digital signal processing by the STB may be at best alleged as an operation of “demodulation and, if necessary, decoding after demodulation” of an input digital signal to be transferred to a connected digital TV. However, during the digital signal processing, Shen’s STB does not distinguish program information such as PSIP information from the contents data of a received broadcast program. In other words, the STB is provided in Shen not for the purpose of converting program information to a suitable format for an apparatus connected to the STB, but simply for the purpose of demodulation/decoding of an input broadcast program as a whole. Note, however, the present application addresses such aspect as converting program

information (e.g., PSIP information) into a suitable format (e.g., for an apparatus connected to the claimed receiver), after decoding the program information. More specifically, even though the STB may be alleged to process (demodulate/decode) an input broadcast program, the STB does not perform a conversion operation on program information included in the broadcast program after the demodulation/decoding.

Thus, Applicant respectfully submits that Shen's STB 306 fails to disclose the claimed program information converter.

Gupta Analysis

In the meantime, the Examiner alleges that Gupta's cross-table analysis system or idea can be combined to render the claimed receiver obvious. Particularly, the Examiner appears to allege that while the claimed stream generator is not disclosed by Shen, Gupta's cross-table analysis system in Fig. 1 discloses the claimed steam generator.

It is well settled that obviousness requirements would not be satisfied unless a reference or combined references teach or suggest every element of the claimed apparatus. In addition, there must be at least some suggestion or motivation to produce a combination to produce the claimed invention. However, the two references (Shen and Gupta) fail to teach or suggest all the elements of the claimed receiver. There also cannot be found any suggestion or motivation to produce the claimed receiver.

Gupta is directed to detecting and displaying inconsistency between two metadata tables included in a digital signal. However, Gupta does not disclose the claimed stream generator as well as the claimed program information converter, at least because there is no teaching or

suggestion that the cross-table analysis system receives the converted program information. Nor
is there any teaching or suggestion of creating a data stream with the converted program
information and the decoded program data. Gupta's system is limited to detection/display of
inconsistency between two metadata tables generated from the demultiplexer 10 which
demultiplexes a transport stream, but the system (Fig. 1) does not disclose any conversion of one
table to another table, which might be better compared to the claimed conversion of the program
information to a suitable format. It is unclear whether, as a result of detecting the inconsistency,
to select one table over the other; whether to simply disregard the other table in favor of the one
table; or whether to delete the other table if inconsistent with the one table. In addition, Gupta's
system does not show creation of another data stream other than the transport stream input to the
demultiplexer 10. As discussed above, the system is limited to only detecting and displaying
inconsistency between metadata tables after demultiplexing an input transport stream; but the
system does not disclose creating another data stream by encoding and multiplexing of the
demultiplexed video and audio streams, and a table stream (whether this table stream is a
converted one or not).

Thus, Gupta fails to teach or suggest the claimed stream generator as well as the program
information converter as opposed to the Examiner's allegation, whereby the combination of
Gupta and Shen fails to disclose every element of the claimed receiver.

In addition, there is no motivation or suggestion to produce the claimed receiver. While
Shen is directed to conversion between analog and digital signals within a digital TV without any
necessity to consider specific program information, and the STB 306 is only a demodulation

device, Gupta discusses only detection/display of inconsistency between two metadata tables without providing any suggestion or motivation to convert one table to another table. Even though the two references share the same field of art in a broad sense, i.e., digital TV signal processing, it is very questionable how a person with ordinary skill in the art would be motivated to combine Shen and Gupta, particularly when all the elements (program information converter and stream generator) of the claim are not taught or suggested in one or a combination of the references.

At least for the forgoing reasons, therefore, Applicant respectfully submits that the claimed receiver would not have been obvious over Shen in view of Gupta.

[Claims 2, 4 and 6]

These claims should be allowable at least based on their dependency on claim 1.

[Claim 3]

The Examiner asserts that the table database 30 in Fig. 1 of Gupta discloses the claimed table generator operable to create at least one new table in a suitable format.

There is no teaching or suggestion in Gupta that the table database 30 contains a new table let alone its failure to disclose creating a new table. The table database simply stores decoded tables received from the table decoder 20 so that the stored tables are simply compared later to find out inconsistencies.

Thus, Applicant respectfully submits that claim 3 should be patentable in addition to its allowability as a dependent claim.

[Claim 5]

As opposed to the Examiner's allegation, it is clear that Gupta does not disclose creation of at least one table (SIT, DIT, PAT or PMT) using information in at least one of VCT, MGT, STT, EIT and ETT of PSIP information.

Continuing from the claim 1 analysis, the cross table analysis system teaches only detection of display of inconsistencies between tables stored in the table database 30. All the tables stored therein are produced by the table decoder 20. There is not teaching or suggestion of creation of one table using information contained in another table before discussing whether the specifically claimed table is created from information on another specific table.

Thus, Applicant respectfully submits that claim 5 should be patentable in addition to its allowability as a dependent claim.

[Claims 7-12]

These claims are method claims corresponding to apparatus claims 1-6. These claims should be allowable for the same reasoning for the corresponding apparatus claims.

[Claim 13]

In rejecting this claim, the Examiner provides basically the same reasoning as for the claim 1 rejection.

However, Shen again fails to teach the claimed program converter operable to convert the decoded informational data into the compatible format. As discussed in the claim 1 analysis, the demodulation performed by the STB 306 of Shen does not teach or suggest the conversion operation of the program converter. Thus, the claimed program converter is not disclosed by

Shen. Gupta also fails to teach or suggest the claimed program converter as discussed in the claim 1 analysis.

Therefore, Applicant submits that claim 13 should be patentable over the references.

[Claims 14 - 17]

These claims should be allowable at least their dependency on claim 13.

V. Conclusion

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,



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